IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Cragun et al.	§	Filed: June 20, 2003
	§	
	§	Group Art Unit: 2165
Serial No.: 10/600,382	§	
	§	Examiner: Michael J. Hicks
Confirmation No.: 8521	§	

For: HETEROGENEOUS MULTI-LEVEL EXTENDABLE INDEXING FOR GENERAL PURPOSE ANNOTATION SYSTEMS

MAIL STOP APPEAL BRIEF - PATENTS
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June 15, 2009 /Tammi Thomas/
Date Tammi Thomas

APPEAL BRIEF

Applicants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2165 dated December 12, 2008, finally rejecting claims 10, 13-14, 22 and 28. The final rejection of claims 10, 13-14, 22 and 28 is appealed. This Appeal Brief is believed to be timely since it is transmitted by the due date of June 13, 2009, as set by the filing of a Notice of Appeal on April 13, 2009.

Since an appeal brief fee in the amount of $500 had been paid for a previous appeal that did not reach a Board Decision, the fees due for filing this appeal brief is $40.00. The Commissioner is hereby authorized to charge $40.00 to counsel's Deposit Account No. 09-0465 / ROC920030127US1 for filing this appeal brief, and for any other fees required to make this appeal brief timely and acceptable to the Office.

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Real Party in Interest

The present application has been assigned to International Business Machines Corporation, Armonk, New York.

Related Appeals and Interferences

Applicant asserts that no other appeals or interferences are known to the Applicant, the Applicant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 10, 13-14, 22 and 28 are pending in the application. Claims 1-27 were originally presented in the application. Claims 28 was added during prosecution. Claims 1-9, 11-12, 15-21, and 23-27 have been canceled without prejudice. Claims 10, 13-14, 22 and 28 stand finally rejected as discussed below. The final rejections of claims 10, 13-14, 22 and 28 are appealed. The pending claims are shown in the attached Claims Appendix.

Status of Amendments

All claim amendments have been entered by the Examiner. No amendments to the claims were proposed after the final rejection.

Summary of Claimed Subject Matter

Claimed embodiments are directed to methods for indexing annotations made or a variety of different types of data objects. A set of parameters uniquely identifying an annotated data object may be converted to an index comprising a set of index values, each corresponding to a column in a homogeneous index table. In order to accommodate the indexing of heterogeneous data objects, a mapping may be provided for each different type (or classification) of data object that may be annotated, that defines how the identifying parameters of that type will be mapped to the columns of the homogeneous index table. By generating a homogeneous set of index values, conventional indexing schemes may be utilized to organize and search annotations made for a variety of different object types. Indexing annotations for new classifications of data objects may be readily supported via the addition of new mappings, without having to redesign the index table or the underlying indexing scheme.

A. CLAIM 10 – INDEPENDENT

Claim 10 is directed to a method of managing annotations for a plurality of different type data objects. See Application, 1:10-12, 3:7-8, 3:15-21, 6:1-4. As claimed, the method includes receiving a set of parameters identifying an annotated data object. The identifying parameters identify locations of the annotated data object. See Application, 6:4-6, 9:20-28, Figure 1, 122, 10:19-21, 12:7-14, Figure 4A, 402. This method also includes selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions. See Application, 6:6-14, 11:25-28 – 12:1, 12:15-28, Figure 4A, 404, 414, 13:1-14, 13:16-28. Additionally, examples of different mappings are shown in Figures 5A – 5C and described at Application, 13:16-28, 14:1-28, 15:1-27, 16:1-3. As claimed, this method also includes creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping. Also as claimed, the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table, and the mapping functions of at least one of the mappings maps more than one

identifying parameter to a single column. See Application, 6:6-14, 10:21-26, 11:16-24, Figure 3, 304, 13:5-14, Figure 4A, 416, 16:5-27, 17:1-13, Figures 6A, 6B.

B. CLAIM 28 – INDEPENDENT

Claim 28 is directed to a computer implemented method of managing annotations for a plurality of different type data objects. See Application, 1:10-12, 3:7-8, and 6:1-4. As claimed, this method includes receiving a set of parameters identifying an annotated data object. The identifying parameters identify locations of the annotated data object. See Application, 6:4-6, 9:20-28, Figure 1, 122, 10:19-21, 12:7-14, Figure 4A, 402. As claimed, this method also includes selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions. Also as claimed, at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a database to the index table columns, and at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a text document to the index table columns. See Application, 6:6-14, 11:25-28 – 12:1, 12:15-28, Figure 4A, 404, 414, 13:1-14, 13:16-28. Additionally, examples of different mappings are shown in Figures 5A – 5C and described at Application, 13:16-28, 14:1-28, 15:1-27, 16:1-3. As claimed, this method also includes creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping, wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table. Also as claimed, the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column. See Application, 6:6-14, 10:21-26, 11:16-24, Figure 3, 304, 13:5-14, Figure 4A, 416, 16:5-27, 17:1-13, Figures 6A, 6B.

Grounds of Rejection to be Reviewed on Appeal

1. A rejection of claims 10, 13-14, 22 and 28 under 35 U.S.C. § 103(a) as being unpatentable over *Chatterjee, et al.,* U.S. Pat. No. 7,162,691 (hereinafter *"Chatterjee"*) in view of *Dobrowski, et al*., U.S. Pat. No. 7,152,072 (hereinafter *"Dobrowski"*).

ARGUMENTS

The Combination of *Chatterjee* and *Dobrowski* does not render any of Claims 10, 13-14, 22 and 28 under 35 U.S.C. § 103(a)

The Applicable Law

The Examiner bears the initial burden of establishing a prima facie case of obviousness. See MPEP § 2141. Establishing a prima facie case of obviousness begins with first resolving the factual inquiries of Graham v. John Deere Co. 383 U.S. 1 (1966). The factual inquiries are as follows:

A. determining the scope and content of the prior art;
B. ascertaining the differences between the claimed invention and the prior art;
C. resolving the level of ordinary skill in the art; and
D. considering any objective indicia of nonobviousness.

Once the Graham factual inquiries are resolved, the Examiner must determine whether the claimed invention would have been obvious to one of ordinary skill in the art. Respectfully, Applicants submit that the Examiner has not properly characterized the teachings of the references and/or the claims at issue. Accordingly, a *prima facie* case of obviousness has not been established.

The Examiner suggests that the present claims are rendered obvious by a combination of:

- a reference disclosing a technique allowing metadata describing multimedia content in a web-page to be used to enhance text-based search results of the web-page (*Chatterjee*) and
- a reference disclosing techniques for managing industrial process data related to chemical and petroleum plants (*Dobrowski*)

Respectfully, Applicants disagree. In particular, Applicants submit that the combination of *Chatterjee* and *Dobrowski* does not teach, show, or even suggest the method recited by claim 10 for "managing annotations for a plurality of different type data objects" that includes "selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions" and also includes "creating an index for the annotated data object by mapping the identifying

parameters to columns in an index table, as specified by the mapping functions of the selected mapping." Independent claim 28 recites similar limitations.

> In this case, the Examiner suggests:
>
> [*Chatterjee* discloses] selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions (*Chatterjee* et al., column 5, lines 30-35).

Final Office Action, p. 5. However, the passage cited by the Examiner describes metadata for different media files being identified by a MIME type. As is widely known, a MIME type refers to "Mutli-purpose Internet Mail Extension," a format originally developed for attaching sounds, images and other media files to electronic mail, but now also used with World Wide Web applications. A MIME mapping is simply a list of file extensions and the types of files they belong to. MIME types are used to identify an application program used to process binary data such as an application used to play music files (i.e., a MIME type to associate with .mp3 files) or an application used to view word processing documents (i.e., a MIME type to associate with .doc files) or an application used to process video data (e.g., a media player to associate with .wmv or .avi files). At the same time, nothing about a MIME type (or using a MIME type to derive metadata about a media file) teaches, shows, or even suggests the claimed limitation of a plurality of different mappings, each containing a different set of mapping functions." The passage cited by the Examiner provides:

> Finally, the content of the media data itself may contain information which can be expressed in text form as metadata. To capture such information, the type and format of the media data may be determined as indicated at 38 in FIG. 2 from the MIME type designation or a registered type designation associated with the filename extension in the URL, or by identifying format-identifying characteristics of the media data.

Chatterjee, 5:28-35. Clearly, nothing in this passage describes a different set of mapping functions associated with a plurality of different mappings, as recited by claim 10. Instead, the passage describes identifying text metadata about a media file based on a MIME type associated with that file.

> The Examiner also suggests:
>
> [*Chatterjee* discloses] creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as

> specified by the mapping functions of the selected mapping, (*Chatterjee* et al., column 1, lines 38-40; column 6, lines 44-51).

Final Office Action, p. 5. However, the passages cited by the Examiner do not disclose an index being created "for the annotated data object by mapping the identifying parameters to columns in an index table" whether "as specified by the mapping functions of the selected mapping" or not. Instead, the passages describe that metadata generated to describe a multimedia object in a web page may be embedded in that webpage. While the text terms of the metadata may ultimately be parsed (e.g., to allow a person to specify a text-based search term and have the page included in search results if the search term appears in the metadata), nothing in this process of embedding metadata in web pages discloses "mapping the identifying parameters to columns in an index table," as claimed. Put simply, there is no table into which the metadata is mapped. Instead, the metadata describing multimedia is embedded back in the web page itself. For example, the first passage describes

> The present invention takes the form of methods and apparatus for first analyzing each Web page to be indexed to identify media data which are incorporated by reference into that Web page; then extracting information describing the media data thus identified from the referencing Web page, from the media file itself, and from other sources; then inserting the extracted information as text annotations into a copy of the original Web page used for indexing purposes, and finally presenting the annotated Web page for processing by conventional text-based Internet indexing and searching facilities. The resulting index with [sic] store the association between the original Web page and the metadata which describes that page's media data content.

Chatterjee, 1:28-41. Plainly, this passage teaches that text-based metadata describing multimedia in a web page (e.g., the name of a song or an actor present in a video) may be embedded in that web page. And that ultimately, the text-based metadata may facilitate text-based searching such that the web page is included in keyword based search results, even if the original page did not include the name of the song or actor. As described, once the metadata is included in the web page, a parsing tool (e.g., a web-based crawler) may include the metadata as keywords (along with actual text present) when the page is added to a keyword search index. In such a case, the index provides an index of web pages that include whatever search terms are within the scope of the index. For example, index may include a list of web pages web page

includes the name of the song or the actor. That is, what gets indexed is not the metadata parameters describing the multimedia, but the web pages.

In contrast, claim 10 (and 28) require a step of "creating an index for the annotated data object by mapping the identifying parameters to columns in an index table." There is utterly no support in *Chatterjee* for the conjecture that the search index of keyword search terms would be created "by mapping the identifying parameters to columns in an index." That is, the extra embedded metadata identifying, e.g., a name or an actor or song title is not "mapped to columns of an index table." And in fact doing is very impractical, as it would require the keyword search index disclosed in *Chatterjee* to have a column for every conceivable text search term. The second passage cited by the Examiner provides:

> The metadata extracted from the content of the media data is appended at 42 to the metadata previously obtained from other sources, including the markup tags which identified the media data, from system directories, and from other sources, such as keyboarded input accepted from a human editor and supplied in response to automatically generated prompts generated during the course of the annotation process.

Chatterjee, 6:44-51. Nothing in this passage discloses the claimed limitation of "creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping," as recited by claim 10. Instead, this passage makes the unremarkable observation that metadata describing multimedia content in a web page may be obtained from different sources, e.g., the file itself (a file name, or an ID3 tag in an MP3 file) or a from a person who manually tags the file – a user typing in the name of a song.

Moreover, the Examiner concedes that:

> Chatterjee et al. does not explicitly teach wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table.

But suggests:

> Chatterjee et al. does teach mappings depending on media type association (Chatterjee et al., column 1, lines 42-46; column 3, lines 48-50)
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to mappings depending on media type association because Chatterjee et al. teaches different media types wherein different

> media-types could contain different amount and type of parameters (Chatterjee et al., column 4, lines 56- 62).

Final Office Action, p. 5. However, the "the media type associations" are not different "mapping functions" each "designed to map a different set of identifying parameters to columns in the index table," as recited by claims 10 and 28. Instead, the media type associations identify a particular program associated with a file on a Web server. The MIME type tells the server, and the Web browsers of any connected users, what the file type of the binary data is, and which application to use to open the data (e.g., a MIME type association used to identify an application to play an MP3 audio track or a PNG MIME type to indicate that binary data is an image). This information may help the system disclosed in *Chatterjee* access metadata embedded in binary data (e.g., to access ID3 information in an MP3 file). Clearly however, the file type associates do not in any way disclose "mapping functions" used to map "identifying parameters to columns in the index table," as recited by claims 10 and 28.

Finally, claims 10 and 28 require that "the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column." The Examiner concedes that the metadata-embedding system disclosed in *Chatterjee* does not disclose this limitation, but turns to *Dobrowski*. Specifically, the Examiner suggests:

> *Dobrowski* et al. does teach wherein the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column (.Dobrowski et al.; figure 4, column 8, lines 44-47).

Final Office Action, p. 5. The brief passage cited by the Examiner provides:

> A number of import parameters specifying a type of device in the import file specified by the user are displayed in a first window 112 of the mapping process startup template 110.

Dobrowski, 8:44-47. *Dobowski* is directed a system for managing data related to industrial process systems "like those used in chemical, petroleum or other processes." *Dobowski*, 1:14-17. *Dobowski* points out that some devices may supply sensor data in a format incompatible with an "Asset Management Solutions (AMS) application sold by Fisher-Rosemont systems." *Dobowski*, 1:56-57. For example, by its own terms:

> Another problem associated with importing device information into an AMS database is a use of enumerations to define various parameters describing a device. For example, in the AMS a parameter named

> pressure_output_transport_function, which is used to describe pressure output transport function of certain type of device, may contain only a value of 0 or 1, where 0 represents a linear function and 1 represents a square root function. On the other hand, a generic text file describing the same type of device from a 3rd Party may define the same characteristic of the device by a parameter named output_pressure_transport_function, which may contain only a value of L or S, where L represents a linear function and S represents a square root function. When importing data from such a generic text file into the AMS application, it is necessary that all instances of L are converted to 0 and all instances of S are converted to 1.

Dobowski, 2:39-53. The "mapping utility" cited by the Examiner:

> allows a mapping of various parameters from various import files contained in the import files database 64 to various parameters used to describe devices in the AMS database 60. The import files contained in the import files database 64 may be provided by various device manufacturers or other third party applications.

Dobowski, 4:59-65. The passage cited by the Examiner points out that devices in an industrial process system may be characterized by a number of parameters. And the particular example in Figure 4 "shows a list of parameters describing Rosemount 1151 Rev. 6 type of devices, such as AC/DC, Deadband Mix, etc., which describe this type of devices in an import file specified by a user." *Dobowski*, 8:67 – 9:3. At the same time, nothing in these passages describing the parameters from an "import file" discloses a mapping function that "maps more than one identifying parameter to a single column" in an index table," as recited by claims 10 and 28.

Accordingly, for all the foregoing reasons, Applicants submit that the examiner has failed to demonstrate that the claims 10 and 28 are obvious in view of the combination of *Chatterjee* and *Dobowski*. Therefore, Applicant respectfully request that the board vacate the rejection of these claims, as well as the rejection of dependent claims 13, 14, and 22.

CONCLUSION

The Examiner errs in finding that claims 10, 13-14, 22 and 28 are unpatentable over *Chatterjee* in view of *Dobrowski* under 35 U.S.C. § 103(a).

Withdrawal of the rejections and allowance of all claims is respectfully requested.

Respectfully submitted, and
S-signed pursuant to 37 CFR 1.4,

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CLAIMS APPENDIX

1-9. (Canceled)

10. (Previously Presented) A computer implemented method of managing annotations for a plurality of different type data objects, comprising:

receiving a set of parameters identifying an annotated data object, wherein the identifying parameters identify locations of the annotated data object;

selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions; and

creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping, wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table, wherein the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column.

11-12. (Canceled)

13. (Previously Presented) The method of claim 10, wherein the more than one identifying parameters are mapped to different sets of bytes in the single column.

14. (Previously Presented) The method of claim 10, wherein:

at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a database to the index table columns; and

at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a text document to the index table columns.

15-21. (Canceled)

22. (Previously Presented) The method of claim 10, wherein at least one of the mappings comprises mapping functions for mapping parameters identifying data objects associated with a text document to the index table columns.

23-27. (Canceled)

28. (Previously Presented) A computer implemented method of managing annotations for a plurality of different type data objects, comprising:

receiving a set of parameters identifying an annotated data object, wherein the identifying parameters identify locations of the annotated data object;

selecting, based on the set of identifying parameters, a mapping from a plurality of mappings, each containing a different set of mapping functions, wherein at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a database to the index table columns, and at least one of the mappings comprises mapping functions for mapping parameters identifying annotated data objects associated with a text document to the index table columns; and

creating an index for the annotated data object by mapping the identifying parameters to columns in an index table, as specified by the mapping functions of the selected mapping, wherein the mapping functions for each mapping are designed to map a different set of identifying parameters to columns in the index table, wherein the mapping functions of at least one of the mappings maps more than one identifying parameter to a single column.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.